

1    **WHAT IS CLAIMED IS:**

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3        1.     An exhaust gas purifying catalyst comprising:

4              a carrier;

5              an NO<sub>x</sub> absorbent catalyst layer; and

6              a three-way catalyst layer;

7              wherein at least one absorbent agent selected from a group of alkali metals and alkali

8          earth metals is added to said NO<sub>x</sub> absorbent catalyst layer; and

9              wherein an effect inhibiting material for inhibiting an effect of said absorbent agent on

10         said three-way catalyst layer is added to at least one of said NO<sub>x</sub> absorbent catalyst layer and

11         said three-way catalyst layer.

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13        2.     An exhaust gas purifying catalyst according to claim 1, wherein:

14              said effect inhibiting material is added to said NO<sub>x</sub> absorbent catalyst layer, and inhibits

15         movement of said absorbent agent to said three-way catalyst layer.

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17        3.     An exhaust gas purifying catalyst according to claim 2, wherein:

18              said effect inhibiting material is comprised of one or more materials selected from a

19         group formed by an acid oxide including at least one acid substance selected from transition

20         elements in an IV group, a V group and a VI group and typical elements in the IV group, the V

21         group and the VI group; a complex oxide including said at least one acid substance; and such

22         materials as not to disturb reaction of a nitrogen oxide and said absorbent agent.

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1           4. An exhaust gas purifying catalyst according to claim 3, wherein:  
2           said effect inhibiting material includes an acid oxide composed of at least one acid  
3        substance among silicon (Si) and tungsten (W).

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5           5. An exhaust gas purifying catalyst according to claim 2, wherein:  
6           said effect inhibiting material includes at least one of zeolite and titanium dioxide  
7        ( $TiO_2$ ).

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9           6. An exhaust gas purifying catalyst according to claim 1, wherein:  
10          said effect inhibiting material is added to said three-way catalyst layer and transforms  
11        into a stable substance by reacting to said absorbent agent.

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13          7. An exhaust gas purifying catalyst according to claim 6, wherein:  
14          said effect inhibiting material comprises an acid material that transforms into a stable  
15        substance by reacting to said absorbent agent.

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17          8. An exhaust gas purifying catalyst according to claim 7, wherein:  
18          said effect inhibiting material includes at least one of silica ( $SiO_2$ ), tungsten (W) and  
19        phosphorus (P).

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21          9. An exhaust gas purifying catalyst according to claim 2, wherein:  
22          said effect inhibiting material is added to said three-way catalyst layer and transforms  
23        into a stable substance by reacting to said absorbent agent.

1           10.       An exhaust gas purifying catalyst according to claim 9, wherein:

2           said effect inhibiting material includes at least one of silica (SiO<sub>2</sub>), tungsten (W) and  
3       phosphorus (P).

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5           11.       An exhaust gas purifying catalyst according to claim 1, further comprising:

6           an absorbent agent block layer for inhibiting movement of said absorbent agent to said  
7       three-way catalyst layer which is formed between said NOx absorbent catalyst layer and said  
8       three-way catalyst layer.

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10          12.       An exhaust gas purifying catalyst according to claim 2, further comprising:

11          an absorbent agent block layer for inhibiting movement of said absorbent agent to said  
12       three-way catalyst layer which is formed between said NOx absorbent catalyst layer and said  
13       three-way catalyst layer.

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15          13.       An exhaust gas purifying catalyst according to claim 6, further comprising:

16          an absorbent agent block layer for inhibiting movement of said absorbent agent to said  
17       three-way catalyst layer which is formed between said NOx absorbent catalyst layer and said  
18       three-way catalyst layer.

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20          14.       An exhaust gas purifying catalyst according to claim 9, further comprising:

21          an absorbent agent block layer for inhibiting movement of said absorbent agent to said  
22       three-way catalyst layer which is formed between said NOx absorbent catalyst layer and said  
23       three-way catalyst layer.

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2       15. An exhaust gas purifying catalyst comprising:

3           a carrier;

4           an NO<sub>x</sub> absorbent catalyst layer; and

5           a three-way catalyst layer; and

6           an effect inhibiting layer to which an effect inhibiting material for inhibiting movement

7       of said absorbent agent to said three-way catalyst layer is added which is formed between said

8       NO<sub>x</sub> absorbent catalyst layer and said three-way catalyst layer;

9           wherein at least one absorbent agent selected from a group of alkali metals and alkali

10      earth metals is added to said NO<sub>x</sub> absorbent catalyst layer.

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12       16. An exhaust gas purifying catalyst according to claim 15, wherein:

13           said effect inhibiting layer is comprised of one or more materials selected from a group

14       formed by an acid oxide including at least one acid substance selected from transition elements

15       in an IV group, a V group and a VI group and typical elements in the IV group, the V group and

16       the VI group; a complex oxide including said at least one acid substance; and such materials as

17       not to disturb reaction of a nitrogen oxide and said absorbent agent.

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19       17. An exhaust gas purifying catalyst according to claim 15, wherein:

20           said effect inhibiting layer includes at least one acid substance between silicon (Si) and

21       tungsten (W).

1        18. An exhaust gas purifying catalyst according to claim 15, wherein:  
2            said effect inhibiting layer includes at least one of zeolite and titanium dioxide (TiO<sub>2</sub>).  
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4        19. An exhaust gas purifying catalyst according to claim 15, wherein:  
5            an effect inhibiting material for inhibiting movement of said absorbent agent to said  
6            three-way catalyst layer is added to said NO<sub>x</sub> absorbent catalyst layer.  
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8        20. An exhaust gas purifying catalyst according to claim 19, wherein:  
9            an effect inhibiting material that transforms into a stable substance by reacting to said  
10          absorbent agent is added to said three-way catalyst layer.

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12        21. An exhaust gas purifying catalyst according to claim 15, wherein:  
13            an effect inhibiting material that transforms into a stable substance by reacting to said  
14          absorbent agent is added to said three-way catalyst layer.

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16        22. A method for manufacturing an exhaust gas purifying catalyst comprising:  
17            forming a first catalyst layer over a carrier; and  
18            forming a second catalyst layer over the first layer;  
19            wherein one of said first catalyst layer and said second catalyst layer comprises a NO<sub>x</sub>  
20          absorbent catalyst layer including at least one absorbent agent selected from a group of alkali  
21          metals and alkali earth metals;  
22            wherein another of said first catalyst layer and said second catalyst layer comprises a  
23          three-way catalyst layer; and

1           wherein an effect inhibiting material for inhibiting an effect of said absorbent agent on  
2    said three-way catalyst layer is added to at least one of said NOx absorbent catalyst layer and  
3    said three-way catalyst layer.

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5           23.     A method for manufacturing an exhaust gas purifying catalyst as claimed in  
6    claim 22, wherein the first catalyst layer is the NOx absorbent catalyst layer and said second  
7    catalyst layer is said three-way catalyst layer.

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9           24.     A method of manufacturing an exhaust gas purifying catalyst as claimed in  
10   claim 22, wherein the second catalyst layer is the NOx absorbent catalyst layer and said first  
11   catalyst layer is said three-way catalyst layer.

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25.     A method for manufacturing an exhaust gas purifying catalyst comprising:

      forming a first catalyst layer over a carrier;

      forming an inhibiting layer over said first catalyst layer; and

      forming a second catalyst layer over the first catalyst layer;

      wherein one of said first catalyst layer and said second catalyst layer comprises a NOx

      absorbent catalyst layer including at least one absorbent agent selected from a group of alkali

      metals and alkali earth metals;

      wherein another of said first catalyst layer and said second catalyst layer comprises a

      three-way catalyst layer; and

      wherein said effect inhibiting layer includes an effect inhibiting material for inhibiting

      movement of said absorbent agent to said three-way catalyst layer.

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2        26.     A method for manufacturing an exhaust gas purifying catalyst as claimed in  
3     claim 25, wherein the first catalyst layer is the NOx absorbent catalyst layer and said second  
4     catalyst layer is said three-way catalyst layer.

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6        27.     A method of manufacturing an exhaust gas purifying catalyst as claimed in  
7     claim 25, wherein the second catalyst layer is the NOx absorbent catalyst layer and said first  
8     catalyst layer is said three-way catalyst layer.

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